

HISTORICAL CHRONOLOGY OF ATLANTIC COAST WATERWAYS

- 1524 - Giovanni da Verrazano, a Florentine mariner seeking the Northwest Passage for the king of France, was the first navigator of whom we have definite record to coast the Atlantic seaboard from the Carolinas to Newfoundland. He put into New York Bay and Narragansett Bay.
- 1525 - Estevan Gomez, a Portuguese in Spanish service out to find the passage, discovered a number of rivers and bays from Cape Breton to Cape Cod, including the Penobscot River, which he followed to the head of navigation at the site of Bangor. He may have sailed as far south as Florida, but the record is not clear.
 - While Gomez was sailing south for the Spanish king, Lucas Vasquez de Ayllon sailed north from the Spanish colony of Santo Domingo with a flotilla of five ships to find the passage and establish a colony. His colony, apparently located on the Cape Fear River, was decimated by fever and a difficult winter, and only a remnant of his expedition made it back to Santo Domingo.
- 1527 - John Rut, sailing for England to find the passage, searched the coasts of Cape Breton Island in Nova Scotia, and New England. He continued to the West Indies, but whether he explored more of the coast is not known.
- 1579 - Simon Ferdinand and John Walker, sent by Sir Humphrey Gilbert to find a site for a colony, explored Penobscot Bay and possibly Narragansett Bay in 1579-1580.
- 1584 - Simon Ferdinand, Philip Amadas, Arthur Barlowe, and Sir Richard Grenville, employed in 1584-1585 to establish a settlement for Sir Walter Raleigh (the ill-fated Roanoke Colony), found inlets through the Carolina banks, explored Pamlico and Albemarle sounds, and ascended several rivers flowing into them. Ferdinand also appears to have put into Chesapeake Bay, claiming to have been there before with Spanish mariners.
- 1585 - Settlers from the Roanoke Colony, rounding Cape Henry in a small boat, explored the southern shore of Chesapeake Bay, Hampton Roads, and the lower estuary of the York River.
- 1588 - Vicente Gonzales, sent to reconnoiter the Roanoke Colony, which Spain intended to destroy and replace with a Spanish settlement, unknowingly sailed past the inlets to the colony and on into Chesapeake Bay, which he explored to its head.

- 1602 - Bartholomew Gosnold, employed by English merchants, explored the New England coast from southern Maine to Buzzards Bay. He named Cape Cod, Martha's Vineyard, and the Elizabeth Islands, and established a temporary post on Cuttyhunk Island to barter with the Indians.
- 1603 - Martin Pring, on a similar trading expedition for English merchants, followed Gosnold's course but put into Massachusetts and Cape Cod bays, which Gosnold had sailed by. For some five weeks he operated a trading post at a good anchorage formerly identified as Plymouth Harbor but now thought to be Provincetown Bay.
- 1604 - Samuel de Champlain, searching for a site for a French colony and for the Northwest Passage, made three voyages between 1604 and 1606 on which he explored and charted the coast from Cape Breton Island to southern Massachusetts. More systematic than his predecessors, he navigated the Penobscot River and the lower reaches of the Kennebec, entered the harbors of Eastport, Machias, Gloucester, Boston, Plymouth, Barnstable, Nauset, and Chatham, and sailed through Vineyard Sound as far as Woods Hole.
- 1605 - George Waymouth, who three years earlier had looked for the Northwest Passage in icebound waters to the north, came to the coast of Maine to find a colonial refuge for English Catholics and fishing grounds for his merchant backers. He discovered Monhegan Island and an anchorage that he named St. George's Harbor.
- 1607 - Captain John Smith, under orders from the Virginia Company to find a passage to the Pacific Ocean, went up the James River and the tributary Chickahominy River looking for a lake at its source that Englishmen believed lay just beyond the Blue Ridge Mountains and fed rivers leading to the Pacific.
- 1608 - Continuing to look for the passage to the Pacific as well as for sites for new settlements, Smith explored numerous bays and creeks in Chesapeake Bay and ascended the Potomac, Patapsco, Sassafras, Patuxent, and Rappahannock rivers.
- 1609 - Henry Hudson, seeking the passage to the Orient for the Dutch East India Company, and using maps sent by John Smith, entered New York Harbor and followed the Hudson River to the head of navigation above Albany. He opened the way for the Dutch fur trade and the settlement of New Netherland.

- 1614 - Captain Adriaen Block, sailing a small vessel built on Manhattan Island, entered Long Island Sound through the Hell Gate and navigated the southern New England coast as far as Massachusetts Bay. Discovering the Connecticut River, he sailed to the head of navigation at Hartford.
- Captain Cornelis Jacobsen Mey, another Dutch navigator, charted Delaware Bay and bestowed his names on the Delaware capes.
- Captain John Smith meticulously explored the shores and waterways of New England (which owes its name to him) from Penobscot Bay to Cape Cod. His Description of New England, published in 1616, contained the most accurate maps and descriptions made up to that time.
- 1662 - The Dutch at New Amsterdam built a small breakwater to protect ships from ice floating from the Hudson River. Few other references to harbor improvement during the colonial period are readily found.
- 1686 - An early local effort at river improvement was the deepening of the Connecticut River channel between Hartford and Wethersfield through the combined efforts of the adjoining towns.
- 1716 - Providing aids to navigation was more necessary and common during the colonial period than was harbor improvement. In 1716 the first American lighthouse began operation at the entrance to Boston Harbor.
- 1762 - A lottery was organized in New York to raise funds for erecting a lighthouse on Sandy Hook.
- 1763 - The colonial assembly of New York authorized the appointment of a master and three or more wardens for the port of New York to commission pilots, repair buoys, and maintain lighthouses.
- 1770 - Citizens of Pennsylvania and New Jersey appointed commissioners to improve navigation on the Delaware River between Trenton and Easton. The next year the Pennsylvania and New Jersey assemblies granted the commissioners legal status. Funding, however, continued to be by subscription.
- 1773 - New Jersey residents raised 3,000 pounds by lottery to clear and deepen the channel of Elizabeth-Town Creek so that boats might be brought to a landing in the center of the town.

- 1774 - The first recorded harbor dredging on the Atlantic coast was the deepening of ship berths at Philadelphia by a horse-powered grab dredge.
- 1775 - The American Revolution revealed the isolation of the colonies from one another and the difficulties of moving goods along the seaboard when the ship traffic was interrupted. The Revolution also saw more western migration. Both developments created incentives for better transportation facilities.
- 1784 - One of the earliest attempts at harbor improvement was dredging in Baltimore Harbor with a Dutch-type mud mill that raised spoil with long-handled scoops operated by man-powered treadmills. Some form of dredging is also said to have been attempted in the Thames River of Connecticut in 1785, in the Hudson River between Albany and Troy in 1799, and in the Delaware River at New Castle in 1803.
- 1785 - The state of Pennsylvania constructed timber piers in the Delaware River at Marcus Hook to provide ships a refuge from drifting ice. This was the first of a number of "ice harbors" built in the Delaware River.
 - The Potomac Canal Company was organized, with George Washington as president, to open the Potomac River to navigation as far as Cumberland, Maryland, from where it would connect by road to the Ohio River. Essentially a river improvement concern, the company undertook canal construction only to bypass falls. The canals, however, absorbed so much of its resources that the company made only minor improvements in the river.
 - The James River Company was chartered to improve navigation on the James River and to link it by turnpike to the Kanawha River, a tributary of the Ohio. This enterprise also owed its conception to Washington.
- 1789 - The First Congress of the United States directed that all expenses for the maintenance and repair of lighthouses, beacons, buoys, and public piers should be paid for from the Treasury of the United States and that all contracts for work be made by the Secretary of the Treasury with the approval of the President. The Treasury assumed control from local authorities of the 12 lighthouses operating on the Atlantic coast.
- 1790 - Beginning in 1790 several states made harbor improvements under federal enabling acts. Georgia was permitted to levy tonnage duties to pay for work at Savannah Harbor;

Maryland to improve Baltimore harbor; Rhode Island to dredge Providence Harbor; and Pennsylvania to construct ice harbors in the Delaware River.

- 1792 - A stock company began construction of a canal around the falls on the Susquehanna River near Columbia, Pennsylvania, and improved navigation through rapids for about 17 miles below Columbia, allowing flatboats to bring produce from interior Pennsylvania and New York to Chesapeake Bay. The project was completed in 1798.
- Work began on a canal to surmount falls on the Connecticut River at South Hadley, Massachusetts, the first in a series of canals bypassing falls that opened flatboat navigation far into New Hampshire and Vermont. The system was completed when the Enfield, or Windsor Locks, Canal opened in 1829.
- 1793 - Construction began on the Dismal Swamp Canal to connect Albemarle Sound, North Carolina, with the Chesapeake Bay at Norfolk. Inexperience, inefficiency, and a paucity of funds retarded progress until federal engineering assistance and stock subscriptions totaling \$200,000 helped transform a muddy ditch into a viable waterway opened in 1828.
- 1796 - A canal to circumvent falls in the Merrimack River was constructed at the future site of Lowell, Massachusetts--America's first textile city. By 1814 companies affiliated with the Middlesex Canal Company had constructed six systems of locks and canals at falls and rapids farther up the river. The project opened barge traffic to Concord, New Hampshire.
- 1798 - Congress approved the incorporation of a company by Massachusetts that would construct a pier at the mouth of the Kenebunk River in Maine to protect the channel.
- 1800 - The Union Company improved sloop navigation on the Connecticut River below Hartford by maintaining the channel through shoals. Like the companies that constructed canals around river falls, the Union Company was authorized to collect tolls.
- The Santee and Cooper Canal, begun in 1792, opened water transportation from the interior of South Carolina via the Santee River system and the Cooper River to Charleston. Twenty-two miles long, it was the first major canal constructed in the United States. It never became profitable. Railroad competition ultimately forced its abandonment in 1858.

- 1802 - Under the 1789 provision relating to navigation safety, Congress appropriated \$30,000 for the Treasury to erect and maintain piers in the Delaware River. Accordingly, piers were constructed at New Castle, Delaware, to provide a harbor of refuge from floating ice.
- 1803 - The Middlesex Canal of Massachusetts, started in 1793, was completed. It permitted the trade of the Merrimack Valley to flow to Boston. Running 27 miles and passing through eight aqueducts and 20 locks, the canal represented the greatest feat of canal construction in America before the Erie. The Middlesex Canal was never profitable and succumbed to railroad completion in 1853.
- 1808 - Albert Gallatin, the U.S. Secretary of the Treasury, submitted a comprehensive plan to bind the new nation together with a government-sponsored system of roads and canals. He proposed the construction of an inland waterway along the Atlantic coast from Boston, Massachusetts, to St. Marys, Georgia. The principal work would be the construction of four canals, which he estimated would cost \$3 million. He thought that his whole program could be completed in ten years.
- 1812 - The state of North Carolina chartered the Roanoke Navigation Company. The company constructed a canal around the falls of the Roanoke River at Weldon.
- 1815 - President Madison urged upon Congress the construction of roads and canals and suggested a constitutional amendment to invest the federal government with that authority.
- South Carolina and Georgia, each faced with competition after 1815 from western producers of cotton, launched ambitious programs for improving their waterways to lessen the cost of marketing crops. Both programs were poorly administered, and the shallow, swift, shoal-infested streams of the Piedmont never succumbed to the designs of the planners.
- 1816 - On November 16 Congress established the Board of Engineers for Fortifications, consisting of three Corps of Engineers officers and one naval officer, to choose sites and plan fortifications. The board and the Topographical Engineers gradually became involved in surveys relating to internal improvements.
- The state of Virginia created a Fund for Internal Improvement, to be administered by a Board of Public Works, through which navigation projects and the construction of roads, bridges, and railroads were carried out until the Civil War.

- 1817 - New York state began to construct the Erie Canal.
- A bill sponsored by Representative John C. Calhoun for federal funding of internal improvements squeaked through Congress, but President Madison, still believing in the need for a constitutional amendment, vetoed it.
- 1818 - Pennsylvania authorized the operators of the Lehigh coal mines to improve navigation on the Lehigh River in order to move their anthracite down the Lehigh and Delaware rivers to Philadelphia.
- 1819 - On January 7 Secretary of War John C. Calhoun submitted a plan, much like Gallatin's, for a national system of roads and canals. He emphasized the benefits for national defense and recommended the extensive use of Army Engineers in making surveys and plans. In hopes of attracting trade and developing a major seaport, North Carolina established a Board for Internal Improvements.
- 1820 - The Treasury Department constructed piers at the mouth of the Kennebunk River in Maine to improve the channel.
- 1822 - On May 7 Congress authorized the Treasury to construct a breakwater at the Isle of Shoals lying off Portsmouth, New Hampshire, and to erect piers at Cape Henlopen at the entrance to Delaware Bay to form a harbor of refuge.
- 1823 - President Monroe adopted the constitutional position that Congress could appropriate funds for internal improvements of national benefit if control of the improvement companies remained with the states. He also recommended that Army Engineers survey the routes for several canals to be built by private companies.
- The Corps of Engineers was called upon to plan the improvement of the harbor of Presque Isle, Pennsylvania, on Lake Erie and to design the piers at Cape Henlopen that Congress had directed the Treasury to construct.
- 1824 - On April 30 Congress passed the General Survey Act authorizing the President to employ Army and civil engineers to make surveys, plans, and estimates for roads and canals of national importance. President Monroe established the Board of Engineers for Internal Improvements to administer the act.
- On May 24 Congress appropriated \$75,000 for navigation improvements on the Mississippi and Ohio rivers. President Monroe assigned this work to the Corps of

Engineers, thus initiating the Corps' role in carrying out as well as planning waterway development. Two days later Congress voted further appropriations for improving the harbor of Presque Isle and for repairing Plymouth Beach, Massachusetts, which sheltered the town's harbor.

- 1825 - The Schuylkill Navigation, opened to traffic in 1825, and the Union Canal, opened in 1827, was a waterway system designed to bring to Philadelphia the trade of interior Pennsylvania and southwestern New York via the Susquehanna River and its tributaries.
 - The Erie Canal was completed. The longest canal in the United States and the largest construction job yet undertaken in America, it funneled much of the commerce of the West to New York City. Even before its completion, sections opened to traffic as early as 1819 had phenomenal success and inspired a canal-building mania in the United States.
- 1826 - On May 20 Congress approved the first omnibus rivers and harbors act providing for more than 20 works and surveys. Congress passed similar bills annually thereafter through 1838. Fifty works of improvement were carried out along the Atlantic seaboard.
- 1827 - The Cumberland and Oxford Canal in Maine was completed. Connecting Sebago Lake with Casco Bay, the canal remained an important outlet for the products of southeastern Maine into the 1870s.
- 1828 - The Blackstone Canal, linking Worcester, Massachusetts, to Providence, Rhode Island, opened. A boon to the development of the area during its brief existence, it succumbed in 1847 to railroad competition.
 - The Delaware and Hudson Canal, the northernmost of the "anthracite canals," opened to carry coal to New York and New England markets. The canal extended from Honesdale, Pennsylvania, to the Hudson River at Rondout.
 - The Chesapeake and Ohio Canal Company was organized to construct a canal up the Potomac River Valley from Georgetown to Cumberland, Maryland. The canal did not reach Cumberland until 1850 and never achieved the goal of crossing the Appalachian divide with 264 locks and a four-mile tunnel. The canal did carry considerable tonnage and continued to be used into the twentieth century. Always suffering from railroad competition, it never became a profitable enterprise.

- The Dismal Swamp Canal between Chesapeake Bay and Albemarle Sound was the first of the four canals of Gallatin's proposed inland waterway to be completed. Already 15 years under construction by a private company when Gallatin issued his report, it became a viable enterprise only after receiving federal financial and engineering assistance in 1826.
- 1829 - The Chesapeake and Delaware Canal, connecting the Chesapeake Bay with the Delaware River, was the second of Gallatin's proposed chain of canals to open. It was constructed by a private corporation, which after a failing start in 1804-1805, resumed work in 1823. The company received engineering assistance from the Corps of Engineers in 1823 and federal financial assistance, through the purchase of company stock, in 1825 and 1829. The Chesapeake and Delaware reduced the distance of water transportation from Philadelphia to Baltimore by more than 300 miles and became a major carrier of the nation's waterborne commerce.
- The Lehigh Canal opened to barge Pennsylvania anthracite from fields at White Haven to the Delaware River at Easton.
- 1831 - The Morris Canal, connecting Newark Bay with the Delaware River at Easton, opened to transport anthracite to New York City and to stimulate agriculture and industry in northern New Jersey. The canal employed 23 "inclined planes," or cable railways, to transport barges over an elevation of 914 feet. Although it could not handle boats of more than 25 tons, the canal did a considerable business and contributed materially to the economic development of the area.
- 1832 - Pennsylvania completed construction of the Delaware Division Canal, an anthracite canal connecting with the Lehigh Canal at Easton. The canal paralleled the Delaware River south to Bristol. From there barges could navigate the river to Philadelphia.
- 1834 - The Pennsylvania Main Line Canal, connecting Philadelphia with Pittsburgh on the Ohio River, opened to compete with the Erie Canal for western commerce. From Philadelphia to Columbia on the Susquehanna River, the transportation was by rail, as was a 36-mile crossing of the crest of the mountains by the Allegheny Portage Railroad. The Main Line did a considerable volume of business, but its construction and operation, together with a system of branch canals, virtually bankrupted the state before the canal and its branches were sold in the 1850s.

- 1835 - The James River Company was reorganized as the James River and Kanawha Company. Making the last attempt to connect the Atlantic to the West by canal, the company constructed a waterway nearly 200 miles up the James River Valley from Richmond to Covington. The company suspended work in 1856 for lack of funds and abandoned plans to pierce the Appalachian divide with a tunnel. Despite railroad competition the canal did a substantial business, but it never recovered financially from high construction costs.

The New Haven and Northampton Canal, built to divert the commerce of the Connecticut River Valley from Hartford to New Haven, opened.

Poorly constructed and constantly beset by difficulties, it was abandoned in 1847.

- 1838 - The Delaware and Raritan Canal, another anthracite canal, opened from Bordentown on the Delaware River to the Raritan River connecting with New York harbor. It was the third of Gallatin's proposed canals to be completed. For a few years it carried greater tonnage than did the Erie.

Congress in effect repealed the General Survey Act of 1824 by enacting legislation prohibiting the employment of Army Engineers by private companies.

Local and sectional rivalries, constitutional objections, partisan politics, and the Depression beginning in 1837 combined to signal an end to the annual rivers and harbors acts of the past dozen years. Projects carried out along the Atlantic seaboard included preserving natural harbor breakwaters by firming beaches and building seawalls, constructing artificial breakwaters and ice-breaker piers, dredging rivers and harbors, and erecting contraction works to deepen channels by the scour of concentrated water currents. Except for a limited measure in 1844 providing for works in the interior, there was not another general rivers and harbors act until 1852. Some appropriations continued to be made, but those for the East Coast were limited to a few minor projects justified by military requirements.

- 1840 - The Susquehanna and Tidewater Canal opened to circumvent rapids and falls extending some 40 miles up the Susquehanna River from the Chesapeake Bay. The canal represented Baltimore's bid to capture trade from Philadelphia. Traffic, which soon became heavy, flowed not only to Baltimore but also to Philadelphia by way of the Chesapeake and Delaware Canal.

- 1852 - On August 30 Congress appropriated in excess of \$2 million for more than 100 works and surveys, 46 of which were on the East Coast. Thereafter, until the close of the Civil War, Congress voted appropriations for only seven improvements; four in the Middle West and three in the East.
- 1856 - The first national platform of the Republican Party included a declaration that appropriations by Congress for river and harbor improvements were constitutional and justified by the obligation of the government to protect the lives and property of its citizens.
- Construction began on the Albemarle and Chesapeake Canal, which opened to traffic three years later.
- 1860 - The tonnage of American ships engaged in all employments had increased from 1.2 million tons in 1830 to 5.4 million tons. The annual tonnage of American vessels entering and clearing American ports had increased between five and six times. The size of ships had also greatly increased. In 1830 a ship exceeding 400 tons was very large; by 1860 many vessels displaced 1,500 or more tons. These developments made the large-scale renewal of river and harbor work imperative.
- 1863 - A waterways convention called by 94 members of Congress brought 2,000 delegates to Chicago to demand improvements on the Erie Canal and other waterways. Such conventions, beginning as early as 1845, added to the pressures for a broad federal program of river and harbor improvement.
- 1864 - On June 28 Congress authorized the Secretary of War to expend \$350,000 to repair harbors on the seaboard and the Great Lakes.
- 1866 - On June 23 Congress appropriated nearly \$3.7 million for navigation improvements throughout the country. The development of waterways continued to expand until about 1914, during which time more than 500 rivers and harbors were improved on the East Coast. Work at major harbors in this period often raced with growing volumes of commerce and increasing size of ships.
- 1867 - On March 2 Congress authorized the first project to improve the main ship channel at Boston Harbor. This and several more projects through 1902 gradually enlarged the channel from 18 feet deep and 100 feet wide to 35 feet deep and between 1,200 and 1,500 feet wide.

- Work begun at Providence River and Harbor in 1852 was renewed. Under nine project modifications through 1910, the channel from Providence into Narragansett Bay, which originally had a controlling depth of 4.5 feet, was expanded to a 30-foot depth and 600-foot width.
- 1870 - Between 1870 and 1912 more than a half-dozen projects gradually increased the governing low-water depth of the Cape Fear River leading to the port of Wilmington, North Carolina, from 7.5 feet to 26 feet.
- 1871 - The Rivers and Harbors Act of March 3 resumed improvement of the Patapsco River channel to Baltimore harbor begun in 1853. Successive projects until 1905 increased the channel depth from 17 to 35 feet.
- A National Commercial Convention meeting in Baltimore launched a movement for the construction of a ship canal, which it hoped would be built by the United States government, between the Chesapeake and Delaware bays. As a result of entreaties by the canal's advocates, the Corps of Engineers between 1878 and 1883 made surveys of six alternative ship canal routes across the Delmarva Peninsula.
- 1873 - Projects adopted from 1873 to 1910 increased the channel depth of the Savannah River to the port of Savannah from 7 feet at mean low water to 26 feet.
- 1876 - Congress adopted the first project for the improvement of Norfolk Harbor. Further authorizations through 1910 provided for the gradual development of a 35-foot main channel from Hampton Roads to beyond the Norfolk Navy Yard on the South Branch of the Elizabeth River.
- 1878 - On June 18 Congress authorized the first in a series of projects running to 1910 that deepened the entrance channel to Charleston Harbor from 12 to 28 feet.
- 1883 - The Florida Coast Line Canal & Transportation Company began construction of the Florida East Coast Canal by dredging waterways paralleling the coast and connecting them with canals. The work was completed in 1912.
- 1885 - The first systematic and permanent improvement of the Delaware River to Philadelphia began with a Corps study in 1885. Between then and 1910, several projects increased the controlling depth of the channel from 17 to 35 feet.

- 1886 - The Rivers and Harbors Act of August 5 authorized the Corps to begin improvement of New York Harbor. Although the entrance channel had a controlling depth of 24 feet, by the 1880s large ships could come in only on flood tides. The channel was deepened to 30 feet, and then by a project adopted in 1899, to 40 feet.
- 1892 - The Lake Drummond Canal and Water Company purchased the Dismal Swamp Canal, which had been deteriorating since the Civil War. Thoroughly reconstructed by its new owners, the canal regained the major share of commerce passing between Albemarle Sound and Norfolk. The canal prospered until 1912, when the United States began construction of an inland waterway between Norfolk and Beaufort Inlet by way of the Albemarle and Chesapeake Canal.
- 1894 - A special commission authorized by Congress and chaired by Chief of Engineers Thomas L. Casey recommended that the United States purchase the Chesapeake and Delaware Canal and convert it to a sea-level ship canal.
- Prompted by the inadequacy of the Delaware and Raritan Canal to meet modern shipping requirements, the city of Philadelphia commissioned a study of other routes across New Jersey for the construction of a ship canal. The commission recommended a route cutting more directly across the state south of the existing canal, but no action was taken.
- 1907 - The Atlantic Deeper Waterways Association was organized in Philadelphia to lobby for the construction of an inland waterway from Boston to Key West.
- A special commission appointed in 1906 to determine the cost and advantages of converting the Chesapeake and Delaware Canal into a ship canal reported that the reconstructed canal would be the most important link in the proposed intracoastal waterway and a valuable benefit.
- 1909 - In the Rivers and Harbors Act of March 3, Congress authorized the first complete surveys for an intracoastal waterway along the Atlantic coast.
- A syndicate formed by August Belmont, a New York investment banker, began construction of the Cape Cod Canal. When completed in 1914, the canal forged the final link in Secretary Gallatin's projected chain of canals, but it did not follow the inland route that he had proposed.

- 1912 - Reporting on the intracoastal waterway survey from Boston to Beaufort, the Corps of Engineers recommended the purchase of the Chesapeake and Delaware Canal and its conversion into a ship canal. The Corps also recommended construction of a 12-foot-deep waterway between Norfolk and Beaufort along the route of the Albemarle and Chesapeake Canal.

On February 17 Congress authorized the purchase of the Albemarle and Chesapeake Canal for \$500,000, and the construction of a waterway 12 feet deep and at least 90 feet wide from Norfolk to Beaufort Inlet. Construction was completed in 1932.

- 1913 - The Corps of Engineers submitted a survey report on the Beaufort, North Carolina, to Key West, Florida, section of the proposed intracoastal waterway. The report revealed serious differences of opinion among the special board conducting the survey, the Chief of Engineers, and the Board of Engineers for Rivers and Harbors as to what action should be taken, and no projects resulted from it.

- 1917 - Congress adopted the project, "Waterway between Beaufort, S.C., and St. Johns River, Fla.," which provided for a channel seven feet deep. The project consolidated three projects adopted earlier. All work called for was completed in 1932.

The project, "Beaufort to Jacksonville, N.C.," providing for a channel three feet deep, incorporated improvements begun on the New River in 1836, between Beaufort and Swansboro in 1886, and between Swansboro and the New River in 1890.

- 1919 - The United States purchased the Chesapeake and Delaware Canal for \$2.5 million. Bills to accomplish this had repeatedly been introduced in Congress since 1907.
- 1920 - The annual reports of the Chief of Engineers from 1920 to 1930 noted that under the current program, improvement of only the more important rivers and harbors was contemplated. In accordance with this policy, from 1920, to 1929, Congress authorized only 48 projects or modifications of existing projects for the Atlantic seaboard.
- 1925 - Several projects for improving specific localities in the natural waterway between Charleston and Beaufort, South Carolina, adopted between 1881 and 1902 were incorporated into the single project, "Waterway from Charleston to Beaufort, S.C." Providing for a channel seven feet deep, the project was completed in 1929.

- 1927 - Congress authorized the construction of the "Inland Waterway, Beaufort to Cape Fear River, N.C." Incorporating the earlier project that had established a 3-foot channel between Beaufort and Jacksonville, North Carolina, the projects provided for a channel 12 feet deep and not less than 90 feet wide extending to the Cape Fear River. The work was completed in 1932.
- Congress authorized the construction of the "Intracoastal Waterway, Jacksonville to Miami, Fla.," provided local interests acquired the necessary rights-of-way and the Florida East Coast Canal, and transferred them cost free to the United States. The state of Florida purchased and conveyed the canal properties to the United States in 1929. The waterway, with channel dimensions 8 feet deep and 100 feet wide, was completed in 1935.
 - The conversion of the Chesapeake and Delaware Canal into a sea-level canal 12 feet deep and 90 feet wide at bottom was completed. By 1932 cargo tonnage passing through the waterway was more than double the tonnage of 1920.
- 1928 - The United States acquired the Cape Cod Canal for \$11.5 million. Haggling over price and opposition within Congress had delayed the purchase, which was first authorized in 1917.
- 1929 - The United States purchased the Dismal Swamp Canal for \$500,000. In 1925 Congress had voted authorization to acquire the canal as an adjunct to the inland waterway from Norfolk to Beaufort Inlet. The canal is now used primarily by recreational boaters.
- 1930 - Construction of the "Intracoastal Waterway from Cape Fear River to Winyah Bay, S.C.," began. The project, which provided for a channel 8 feet deep and 75 feet wide, was completed in 1936.
- Beginning in 1930 expenditures for navigation improvements increased considerably and remained at a high level throughout the decade. Public works and emergency relief programs accounted in part for the increase. Giving attention to both large and small waterways, Congress authorized 265 projects for the Atlantic seaboard.
- 1932 - The Corps of Engineers recommended the construction of a waterway 10 feet deep and 90 feet wide between Winyah Bay and Charleston, South Carolina. Starting in 1900 several

separate projects had improved the natural waterway between these localities to a minimum depth of 4 feet. The new project was included in the public works program started in 1933, authorized by Congress in 1935, and completed in 1936.

- 1933 - The reconstruction of the Cape Cod Canal began as an emergency relief measure by the Public Works Administration. In 1935 Congress authorized new project plans, and by 1940 reconstruction was essentially completed. From a narrow waterway that had failed to become a paying enterprise under private ownership, the canal was rebuilt into a passage 32 feet deep and 480 feet wide at bottom. Commerce currently averages about 12.5 million tons annually.
 - The Delaware and Raritan Canal, after more than a half-century of declining traffic, ceased operation. The next year the Pennsylvania Railroad relinquished its rights to the waterway to the state of New Jersey.
- 1935 - Congress authorized the construction of the "Intracoastal Waterway, Miami to Key West, Fla." The waterway, however, was to extend only as far as Cross Bank in Florida Bay, where it would connect with Key Largo and Plantation Key. A Corps of Engineers report had concluded that the construction of a seven-foot channel was justified only to that point. The necessary dredging was accomplished in 1938-1939.
 - Congress approved the enlargement of the Chesapeake and Delaware Canal to 27 feet deep and 250 feet wide at bottom, initiated with funds from the Emergency Relief Appropriations Act. The work was completed in 1938. Cargo tonnage carried through the canal nearly quadrupled between 1935 and 1940.
- 1937 - Congress authorized increasing the channel dimensions of the Intracoastal Waterway from the Cape Fear River to Savannah to 12 feet deep and not less than 90 feet wide. This action extended the dimensions that already existed on the waterway from the Cape Fear River to Norfolk. Work was completed in 1940.
- 1938 - On the request of carriers using the Intracoastal Waterway, Congress authorized the enlargement of the channel between Savannah and the St. Johns River to 12 feet deep and 90 feet wide. The Corps completed the work in 1941.

- 1941 - World War II restricted river and harbor work to a minimum as projects not directly connected with defense and war efforts were suspended. Only eight construction projects on the East Coast were continued or initiated. All were to facilitate the movement of naval or supply vessels.
- 1942 - Because of the submarine threat to Atlantic coast shipping during World War II, the Corps of Engineers, after years of reporting adversely on the construction of a canal across New Jersey to unite the Delaware River with New York Bay as the Delaware and Raritan Canal had formerly done, finally endorsed the proposal. The Board of Engineers for Rivers and Harbors recommended building a 14-foot-deep barge canal, while the Chief of Engineers favored a 27-foot-deep ship canal. No action was taken, and a canal across New Jersey continues to be the "Missing Link" in the Intracoastal Waterway.
- 1945 - The enlargement of the Intracoastal Waterway from Jacksonville to Miami, Florida, to 12 feet deep and 125 feet wide was authorized. An economic study report of 1960 led to a reduction of the project depth to 10 feet for the portion of the waterway between Fort Pierce and Miami. Construction was completed in 1965.
- On the basis of a Corps of Engineers review report submitted in 1942, Congress authorized the completion of the Intracoastal Waterway to Key West with a seven-foot channel. The work was never funded, and following an economic study report of 1963, it was placed in the inactive category.
 - The New Jersey Intracoastal Waterway, constructed by the state between 1908 and 1918, was authorized as a federal project with the channel to be deepened from 6 to 12 feet. The improvement was justified in part on the grounds that the waterway, as an alternative to a canal across New Jersey, was an essential part of the intracoastal route from Boston to Miami. The project was soon deferred for restudy, and construction has not been undertaken.
- 1947 - Legislation consolidated the six intracoastal waterway projects from Norfolk to the St. Johns River into the "Atlantic Intracoastal Waterway between Norfolk, Vs., and St. Johns River, Fla."
- 1954 - Congress authorized the enlargement of the Chesapeake and Delaware Canal to 35 feet deep and 450 feet wide. By 1970 the project was approximately 87 percent completed. Since then only minor work has been carried out.

- 1956 - River and harbor work on the East Coast was resumed on a sizable scale with 38 projects under construction.
- 1958 - The number of Atlantic seaboard navigation projects started each year began gradually to decline until in fiscal year 1980 none were started.
- 1979 - Between 1945 and 1979 more than 250 improvement projects were initiated on the Atlantic seaboard. The main channels of 26 major harbors were dredged to depths of 35 to 45 feet. Lesser commercial ports were improved, as were many small harbors used primarily by fishing and recreational fleets.